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1. Document ID: US 20030122825 A1

L2: Entry 1 of 27 File: PGPB Jul 3, 2003

DOCUMENT-IDENTIFIER: US 20030122825 A1
TITLE: Image processing apparatus and method that avoid generation of moire

Detail Description Paragraph (72):
[0092] The low-resolution conversion unit 305 converts image resolution into lower image resolution with respect to the 1200-dpi/8-bit image data supplied from the gamma correction unit 304, thereby supplying 600-dpi/8-bit image data to the halftone processing unit 306. Since high frequency components are unnecessary and undesirably cause moir, it is preferable to apply a smoothing filter that cuts off high frequency components prior to the conversion of image resolution into lower image resolution. The filter (4) shown in FIG. 5 would be best suited for this purpose. In practice, however, the filter (5) produces almost the same image quality in output images. As previously described, the filter (5) (i.e., the filters shown in FIGS. 3A through 3C) has simple filter coefficients, and requires only addition and shift operations. Further, reference in the sub-scan direction is only made to a next adjacent line. Accordingly, the use of such a filter has an advantage in that the amount of line memories can be reduced.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KMC | Draw Desc | Image

2. Document ID: US 20030058460 A1

L2: Entry 2 of 27 File: PGPB Mar 27, 2003

DOCUMENT-IDENTIFIER: US 20030058460 A1
TITLE: Method of setting laser power and developer bias in an electrophotographic machine based on an estimated intermediate belt reflectivity

Summary of Invention Paragraph (6):
[0005] Toner patch sensors are used in printers and copiers to monitor the toner density of unfused images and provide a means of controlling the print darkness. In color printers and copiers, the toner patch sensors are used to maintain the color balance and in some cases to modify the gamma correction or halftone linearization as the electrophotographic process changes with the environment and aging effects. Conventional reflection based toner sensors use a single light source to illuminate a test patch of toner and one or more photosensitive devices to detect the reflected light.

Detail Description Paragraph (13):
[0026] Test patches can be generated for a number of laser power and developer bias conditions and predicted L* and b* values can be computed for each test condition. By comparing the predicted L*and b* values to target values for solid area patches of each color, an electrophotographic operating point may be selected for each color toner cartridge 20, 22, 24, 26 which will give the desired image densities. The L* and b* values for halftone test patches can also be predicted using similar empirically determined equations. These values can then be used to linearize the

halftone printing curve (sometimes referred to as making a gamma correction).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 3. Document ID: US 20030001810 A1

L2: Entry 3 of 27 File: PGPB Jan 2, 2003

DOCUMENT-IDENTIFIER: US 20030001810 A1
TITLE: Method for driving liquid crystal display, liquid crystal display device and monitor provided with the same

Summary of Invention Paragraph (30):
[0026] Also, a preferable mode is one wherein, in the first step, the gamma correcting data is obtained by using a first sub-step of measuring luminance to be obtained when a data signal providing a minimum gray level to a maximum gray level is fed to the data electrode in the liquid crystal display to calculate a gamma characteristic of the liquid crystal display, by using a second sub-step of measuring a common potential V.sub.X to be used when each halftone n.sub.X is displayed on the liquid crystal display and of calculating a difference, as a current voltage V.sub.DCX, between a common potential V.sub.REF to be used when a gray scale serving as a reference is displayed on the liquid crystal display and the measured common potential V.sub..., by using a third sub-step of measuring a data signal V.sub.n% to be fed to the data electrode when the halftone n.sub.X is displayed on the liquid crystal display, by using a fourth sub-step of, in order to have the gamma characteristic be matched to a desired gamma characteristic, if a gray scale obtained by making a gamma correction to a gray level n.sub.0 is an integer, using the obtained gray scale as a new gray level n.sub.1 and, if a gray scale obtained by making a gamma correction to the gray level n.sub.0 is not an integer, employing a gray scale obtained by substituting two gray levels n.sub.a and n.sub.b nearest to a gray scale that provides desired luminance in a gamma characteristic of the liquid crystal display into an equation (2), as the new gray scale n.sub.1 and, in case of a minimum gray level and a maximum gray level, employing the gray level n.sub.0 as the new gray scale n.sub.1 and, by using a fifth sub-step of, when equations (3) and (4) are derived between a data signal .vertline.V.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.V.sub.n1-.vertline. to be fed during a negative frame that are applied to the data electrode when the gray level n.sub.1 is displayed on the liquid crystal display without making a gray-scale correction and a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame that are applied to the data electrode when the gray level n.sub.X is displayed on the liquid crystal display by making a gray-scale correction and in case of using a gray scale to be displayed on the liquid crystal display when a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame is applied to the data electrode, as a gray level n.sub.r+, and using a gray scale to be displayed on the liquid crystal display when a data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame is applied to the data electrode, as a gray level n.sub.r-, if the gray level n.sub.r+ and gray level n.sub.r- are integers and are a minimum level or a maximum level, employing the gray level n.sub.1+ and gray level n.sub.r- as a gray scale and, if the gray level n.sub.r+ and gray level n.sub.r- are not integers, employing gray levels obtained by substituting two gray levels n.sub.c+ and n.sub.d+ to be fed during a positive frame and two gray levels n.sub.c- and n.sub.d- to be fed during a negative frame being nearest to gray levels that provide the data signal .vertline.U.sub.nl+.vertline. and .vertline.U.sub.nl-.vertline. in a characteristic of the data signal for a gray scale of the liquid crystal display into equations (5) and (6), as gray level n.sub.r+ and gray level n.sub.r-:

Summary of Invention Paragraph (59):

[0048] Also, a preferable mode is one wherein the gamma correcting circuit obtains the gamma correcting data by measuring luminance to be obtained when a data signal providing a minimum gray level to a maximum gray level is fed to the data electrode in the liquid crystal display to calculate a gamma characteristic of the liquid crystal display, by measuring a common potential V.sub.X to be used when each halftone n.sub.X is displayed on the liquid crystal display and by calculating a difference, as a current voltage V.sub.DCX, between a common potential V.sub.REF to be used when a gray scale serving as a reference is displayed on the liquid crystal display and the measured common potential V.sub.X, by measuring a data signal V.sub.nx to be fed to the data electrode when the halftone n.sub.X is displayed on the liquid crystal display and, in order to have the gamma characteristic be matched to a desired gamma characteristic, if a gray scale obtained by making a gamma correction to a gray level n.sub.0 is an integer, by employing the obtained gray scale as a new gray level n.sub.1 and, if a gray scale obtained by making a gamma correction to the gray level n.sub.0 is not an integer, by employing a gray scale obtained by substituting two gray levels n.sub.a and n.sub.b nearest to a gray scale that provides desired luminance in a gamma characteristic of the liquid crystal display into an equation (9), as the new gray scale n.sub.1 and, in case of a minimum gray level and a maximum gray level, by employing the gray level n.sub.0 as the new gray scale n.sub.1 and, when equations (10) and (11) are derived between a data signal .vertline.V.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.V.sub.n1-.vertline. to be fed during a negative frame that are applied to the data electrode when the gray level n.sub.1 is displayed on the liquid crystal display without making a gray-scale correction and a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame that are applied to the data electrode when the gray level n.sub.X is displayed on the liquid crystal display by making a gray scale correction and in case of using a gray scale to be displayed on the liquid crystal display when a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame is applied to the data electrode, as a gray level n.sub.r+, and using a gray scale to be displayed on the liquid crystal display when a data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame is applied to the data electrode, as a gray level n.sub.r-, if the gray level n.sub.r+ and gray level n.sub.r- are integers and are a minimum level or a maximum level, by employing the gray level n.sub.r+ and gray level n.sub.r- as a gray scale and, if the gray level n.sub.r+ and gray level n.sub.r- are not integers, by employing gray levels obtained by substituting two gray levels n.sub.c+ and n.sub.d+ to be fed during a positive frame and two gray levels n.sub.c- and n.sub.d- to be fed during a negative frame being nearest to gray levels that provide the data signal .vertline.U.sub.n1+.vertline. and .vertline.U.sub.n1-.vertline. in a characteristic of the data signal for a gray scale of the liquid crystal display into equations (12) and (13), as gray level n.sub.r+ and gray level n.sub.r-:

Summary of Invention Paragraph (68):
[0052] Also, a preferable mode is one wherein the gamma correcting circuit obtains the gamma correcting data by measuring luminance to be obtained when a data signal providing a minimum gray level to a maximum gray level is fed to the data electrode in the liquid crystal display to calculate a gamma characteristic of the liquid crystal display, by measuring a common potential V.sub.% to be used when each halftone n.sub.X is displayed on the liquid crystal display and by calculating a difference, as a current voltage V.sub.DCX, between a common potential V.sub.REF to be used when a gray scale serving as a reference is displayed on the liquid crystal display and the measured common potential V.sub.X, by measuring a data signal V.sub.nx to be fed to the data electrode when the halftone n.sub.X is displayed on the liquid crystal display, in order to have the gamma characteristic be matched to a desired gamma characteristic, if a gray scale obtained by making a gamma correction to a gray level n.sub.0 is an integer, by employing the obtained gray scale as a new gray level n.sub.1 and, if a gray scale obtained by making a gamma correction to the gray level n.sub.0 is not an integer, by employing a gray scale obtained by substituting two gray levels n.sub.a and n.sub.b nearest to a gray scale that provides desired luminance in a gamma characteristic of the liquid crystal display into an equation (14), as the new gray scale n.sub.1 and, in case of a minimum gray level and a maximum gray level, by employing the gray level n.sub.0 as the new gray scale n.sub.1 and, when equations (15) and (16) are derived between a

data signal .vertline.V.sub.n1+.vertl- ine. to be fed during a positive frame and data signal .vertline.V.sub.n1-.vertline. to be fed during a negative frame that are applied to the data electrode when the gray level n.sub.1 is displayed on the liquid crystal display without making a gray-scale correction and a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame that are applied to the data electrode when the gray level n.sub.X is displayed on the liquid crystal display by making a gray scale correction and in case of using a gray scale to be displayed on the liquid crystal display when a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame is applied to the data electrode, as a gray level n.sub.r+, and using a gray scale to be displayed on the liquid crystal display when a data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame is applied to the data electrode, as a gray level n.sub.r-, if the gray level n.sub.r+ and gray level n.sub.r- are integers and are a minimum level or a maximum level, by employing the gray level n.sub.r+ and gray level n.sub.r- as a gray scale and, if the gray level n.sub.r+ and gray level n.sub.r- are not integers, by employing gray levels obtained by substituting two gray levels n.sub.c+ and n.sub.d+ to be fed during a positive frame and two gray levels n.sub.c- and n.sub.d- to be fed during a negative frame being nearest to gray levels that provide the data signal .vertline.U.sub.n1+.vertline. and .vertline.U.sub.n1-.vertline. in a characteristic of the data signal for a gray scale of the liquid crystal display into equations (17) and (18), as gray level n.sub.r+ and gray level n.sub.r- and wherein the gamma correcting circuit reads the gamma correcting data from the corrected data storing circuit for every digital video data and feeds the read data to the data signal producing circuit:

Detail Description Paragraph (54):
[0122] FIG. 7 is a schematic block diagram showing a configuration of a liquid crystal display device employing a method for driving a liquid crystal display of a second embodiment of the present invention. In FIG. 7, same reference numbers are assigned to corresponding parts having same functions as in FIG. 1 and their descriptions are omitted accordingly. The liquid crystal display device of the second embodiment includes, instead of the gamma correction data storing circuit 22, gamma correcting circuit 23, and control circuit 25 shown in FIG. 1, newly a gamma correcting data storing circuit 31, a gamma correcting circuit 32 and a control circuit 33. The liquid crystal display device of the embodiment has a gray-scale correcting function by which a voltage of data red signal, data green signal, and data blue signal is made different, when a gamma correction is made, depending on whether a signal is fed during a positive frame or during a negative frame when halftones are provided. Moreover, the liquid crystal display of the embodiment, as described later, makes a gamma correction and a gray-scale correction based on contents being stored in the gamma correcting data storing circuit 31, that is, each value of luminance to be obtained when each gray shade is displayed on the color liquid crystal display 1, a value of a feedthrough component (direct current component) of a common potential V.sub.com at each gray level in the color liquid crystal display 1, and a value of a data signal to be fed to a data electrode to be obtained when each gray shade is displayed on the color liquid crystal display 1.

CLAIMS:

9. The method for driving a liquid crystal display according to claim 6, wherein, in said first step, said gamma correcting data is obtained by using a first sub-step of measuring luminance to be obtained when a data signal providing a minimum gray level to a maximum gray level is fed to said data electrode in said liquid crystal display to calculate a gamma characteristic of said liquid crystal display, by using a second sub-step of measuring a common potential V.sub.X to be used when each halftone n.sub.x is displayed on said liquid crystal display and of calculating a difference, as a current voltage V.sub.DCX, between a common potential V.sub.REF to be used when a gray scale serving as a reference is displayed on said liquid crystal display and said measured common potential V.sub.X, by using a third sub-step of measuring a data signal V.sub.nx to be fed to said data electrode when said halftone n.sub.x is displayed on said liquid crystal display, by using a fourth sub-step of, in order to have said gamma characteristic be matched to a desired gamma characteristic, if a gray scale obtained by making a gamma correction to a gray level n.sub.0 is an integer, employing said obtained gray scale as a new gray level

n.sub.1 and, if a gray scale obtained by making a gamma correction to said gray level n.sub.0 is not an integer, employing a gray scale obtained by substituting two gray levels n.sub.a and n.sub.b nearest to a gray scale that provides desired luminance in a gamma characteristic of said liquid crystal display into an equation (2), as said new gray scale n.sub.1 and, in case of a minimum gray level and a maximum gray level, employing said gray level n.sub.0 as said new gray scale n.sub.1 and, by using a fifth sub-step of, when equations (3) and (4) are derived between a data signal .vertline.V.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.V.sub.n1-.vertline. to be fed during a negative frame that are applied to said data electrode when said gray level n.sub.1 is displayed on said liquid crystal display without making a gray-scale correction and a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame that are applied to said data electrode when said gray level n.sub.X is displayed on said liquid crystal display by making a gray-scale correction and in case of using a gray scale to be displayed on said liquid crystal display when a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame is applied to said data electrode, as a gray level n.sub.r+, and using a gray scale to be displayed on said liquid crystal display when a data signal .vertline.U.sub.m1-.vertline. to be fed during a negative frame is applied to said data electrode, as a gray level n.sub.r-, if said gray level n.sub.r+ and gray level n.sub.r- are integers and are a minimum level or a maximum level, employing said gray level n.sub.r+ and gray level n.sub.r- as a gray scale and, if said gray level n.sub.r+ and gray level n.sub.r- are not integers, employing gray levels obtained by substituting two gray levels n.sub.c+ and n.sub.d+ to be fed during a positive frame and two gray levels n.sub.c- and n.sub.d- to be fed during a negative frame being nearest to gray levels that provide said data signal .vertline.U.sub.n1+.vertline. and .vertline.U.sub.n1-.vertline. in a characteristic of said data signal for a gray scale of said liquid crystal display into equations (5) and (6), as gray level n.sub.r+ and gray level n.sub.r-: n.sub.1=(m.sub.0+m.sub.b.-multidot.n.sub.a-m.sub.a.multidot.n.sub.b)/(m.sub.b-m.sub.a) Equation (2) where "m.sub.a" denotes luminance that can be obtained when a gray level is "n.sub.a" in a gamma characteristic of said color liquid crystal display and "m.sub.b" denotes luminance that can be obtained when said gray level is "n.sub.b" in said gamma characteristic of said color liquid crystal display: .vertline.U.sub.n1+.vertline.=.vertline..vertline.V.sub.-n1+.vertline.-V.sub.DCx.vertline. Equation (3) .vertline.U.sub.n1-.vertli-ne.=.vertline..vertline.V.sub.n1-.vertline.+V.sub.DCx.vertline. Equation (4) n.sub.r+=(.vertline.U.sub.n1+.vertline.+.vertline.U.sub.nd+.vertline.-.multidot.n.sub.c-.vertline.U.sub.nc+.vertline..multidot.n.sub.d)/(.vertli-ne.U.sub.nd+.vertline.-.vertline.U.sub.nc+.vertline.) Equation (5) where each of the ".vertline.U.sub.nc+.vertline." and ".vertline.U.sub.nd+.vert- line." is a data signal used when each of said gray levels n.sub.c and n.sub.d to be fed during a positive frame is displayed in said characteristic of the data signal for a gray scale of said liquid crystal display: n.sub.r-=(.vertline.U.sub.n1+.vertline.+.vertline.U.sub.nd-.vert-line..multidot.n.sub.c-.vertline.U.sub.nc-.vertline..multidot.n.sub.d)/(.v-ertline.U.sub.nd-.vertline.-.vertline.U.sub.nc-.vertline.) Equation (6) where each of said ".vertline.U.sub.nc-.vertline." and ".vertline.U.sub.nd-.vertline." is a data signal used when each of said gray levels n.sub.c and n.sub.d to be provided during a negative frame is displayed in said characteristic of said data signal for a gray scale of said liquid crystal display.

23. The liquid crystal display device according to claim 20, wherein said gamma correcting circuit obtains said gamma correcting data by measuring luminance to be obtained when a data signal providing a minimum gray level to a maximum gray level is fed to said data electrode in said liquid crystal display to calculate a gamma characteristic of said liquid crystal display, by measuring a common potential V.sub.X to be used when each halftone n.sub.X is displayed on said liquid crystal display and by calculating a difference, as a current voltage V.sub.DCX, between a common potential V.sub.REF to be used when a gray scale serving as a reference is displayed on said liquid crystal display and said measured common potential V.sub.X, by measuring a data signal V.sub.nx to be fed to said data electrode when said halftone n.sub.x is displayed on said liquid crystal display and, in order to have said gamma characteristic be matched to a desired gamma characteristic, if a gray

scale obtained by making a gamma correction to a gray level n.sub.0 is an integer, by employing said obtained gray scale as a new gray level n.sub.1 and, if a gray scale obtained by making a gamma correction to said gray level n.sub.0 is not an integer, by employing a gray scale obtained by substituting two gray levels n.sub.a and n.sub.b nearest to a gray scale that provides desired luminance in a gamma characteristic of said liquid crystal display into an equation (9), as said new gray scale n.sub.1 and, in case of a minimum gray level and a maximum gray level, by employing said gray level n.sub.0 as said new gray scale n.sub.1 and, when equations (10) and (11) are derived between a data signal .vertline.V.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.V.sub.n1-.vertline. to be fed during a negative frame that are applied to said data electrode when said gray level n.sub.1 is displayed on said liquid crystal display without making a gray-scale correction and a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame that are applied to said data electrode when said gray level n.sub.X is displayed on said liquid crystal display by making a gray-scale correction and in case of using a gray scale to be displayed on said liquid crystal display when a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame is applied to said data electrode, as a gray level n.sub.r+, and using a gray scale to be displayed on said liquid crystal display when a data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame is applied to said data electrode, as a gray level n.sub.r-, if said gray level n.sub.r+ and gray level n.sub.r- are integers and are a minimum level or a maximum level, by employing said gray level n.sub.r+ and gray level n.sub.r- as a gray scale and, if said gray level n.sub.r+ and gray level n.sub.r- are not integers, and by employing gray levels obtained by substituting two gray levels n.sub.c+ and n.sub.d+ to be fed during a positive frame and two gray levels n.sub.c- and n.sub.d- to be fed during a negative frame being nearest to gray levels that provide said data signal .vertline.U.sub.n1+.vertline. and .vertline.U.sub.n1-.vertline. in a characteristic of said data signal for a gray scale of said liquid crystal display into equations (12) and (13), as gray level n.sub.r+ and gray level n.sub.r-: n.sub.1=(m.sub.0+m.sub.b.multidot.n.sub.a-m.sub.a.mu- ltidot.n.sub.b)/(m.sub.b-m.sub.a) Equation (9) where "m.sub.a" denotes luminance that can be obtained when a gray level is "n.sub.a" in a gamma characteristic of a color liquid crystal display and "m.sub.b" denotes luminance that can be obtained when said gray level is "n.sub.b" in said gamma characteristic of said color liquid crystal display: .vertline.U.sub.n1+.vertline.=.vertline..vertline.V.sub.n1+.vertline.-V.s- ub.DCx.vertline. Equation (10) .vertline.U.sub.n1-.vertline.=.vertline..v- ertline.V.sub.n1-.vertline.+V.sub.DCx.vertline. Equation (11) n.sub.r+=(.vertline.U.sub.n1+.vertline.+.vertline.U.sub.nd+.vertline..mul- tidot.n.sub.c-.vertline.U.sub.nc+.vertline..multidot.n.sub.d)/(.vertline.U- .sub.nd+.vertline.-.vertline.U.sub.nc+.vertline.) Equation (12) where each of said ".vertline.U.sub.nc+.vertline." and ".vertline.U.sub.nd+.ver- tline." is a data signal used when each of said gray levels n.sub.c and n.sub.d for a positive frame is displayed in said characteristic of said data signal for a gray scale of said liquid crystal display: n.sub.r-=(.vertline.U.sub.n1-.vertline.+.vertline.U.sub.nd-.vertline..mul- tidot.n.sub.c-.vertline.U.sub.nc-.vertline..multidot.n.sub.d)/(.vertline.U- .sub.nd-.vertline.-.vertline.U.sub.nc-.vertline.) Equation (13) where each of said ".vertline.U.sub.nc-.vertline." and ".vertline.U.sub.nd-.ver- tline." is a data signal used when each of said gray levels n.sub.c and n.sub.d to be provided during a negative frame is displayed in said characteristic of said data signal for said gray scale of said liquid crystal display.

24. The liquid crystal display device according to claim 20, wherein said gamma correcting circuit obtains said gamma correcting data by measuring luminance to be obtained when a data signal providing a minimum gray level to a maximum gray level is fed to said data electrode in said liquid crystal display to calculate a gamma characteristic of said liquid crystal display, by measuring a common potential V.sub.X to be used when each halftone n.sub.X is displayed on said liquid crystal display and by calculating a difference, as a current voltage V.sub.DCX, between a common potential V.sub.REF to be used when a gray scale serving as a reference is displayed on said liquid crystal display and said measured common potential V.sub.X, by measuring a data signal V.sub.nx to be fed to said data electrode when said

halftone n.sub.X is displayed on said liquid crystal display, in order to have said gamma characteristic be matched to a desired gamma characteristic, if a gray scale obtained by making a gamma correction to a gray level n.sub.0 is an integer, by employing said obtained gray scale as a new gray level n.sub.1 and, if a gray scale obtained by making a gamma correction to said gray level n.sub.0 is not an integer, by employing a gray scale obtained by substituting two gray levels n.sub.a and n.sub.b nearest to a gray scale that provides desired luminance in a gamma characteristic of said liquid crystal display into an equation (14), as said new gray scale n.sub.1 and, in case of a minimum gray level and a maximum gray level, by employing said gray level n.sub.0 as said new gray scale n.sub.1 and, when equations (15) and (16) are derived between a data signal .vertline.V.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.V.sub.n1-.vertline. to be fed during a negative frame that are applied to said data electrode when said gray level n.sub.1 is displayed on said liquid crystal display without making a gray-scale correction and a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame and data signal .vertline.U.sub.n/-.vertline. to be fed during a negative frame that are applied to said data electrode when said gray level n.sub.x is displayed on said liquid crystal display by making a gray scale correction and in case of using a gray scale to be displayed on said liquid crystal display when a data signal .vertline.U.sub.n1+.vertline. to be fed during a positive frame is applied to said data electrode, as a gray level n.sub.r+, and using a gray scale to be displayed on said liquid crystal display when a data signal .vertline.U.sub.n1-.vertline. to be fed during a negative frame is applied to said data electrode, as a gray level n.sub.r-, if said gray level n.sub.r+ and gray level n.sub.r- are integers and are a minimum level or a maximum level, by employing said gray level n.sub.r+ and gray level n.sub.r- as a gray scale and, if said gray level n.sub.r+ and gray level n.sub.r- are not integers, by employing gray levels obtained by substituting two gray levels n.sub.r+ and n.sub.d- to be fed during a positive frame and two gray levels n.sub.c- and n.sub.d- to be fed during a negative frame being nearest to gray levels that provide said data signal .vertline.U.sub.n1+.vertline. and .vertline.U.sub.n1-.vertline. in a characteristic of said data signal for a gray scale of said liquid crystal display into equations (17) and (18), as gray level n.sub.r+ and gray level n.sub.r- and wherein said gamma correcting circuit reads said gamma correcting data from said corrected data storing circuit for every digital video data and feeds said read data to said data signal producing circuit: n.sub.1=(m.sub.0+m.sub.b.multidot.n.sub.a-m.sub.a.multidot.n.sub-.b)/(m.sub.b-m.sub.a) Equation (14) where "m.sub.a" denotes luminance that can be obtained when a gray level is "n.sub.a" in a gamma characteristic of a color liquid crystal display and "m.sub.b" denotes luminance that can be obtained when said gray level is "n.sub.b" in said gamma characteristic of said color liquid crystal display: .vertline.U.sub.n1+.vertline.=.vertline..vertline.V.sub.n1+.vertline.-V.s-ub.DCx.vertline. Equation (15) .vertline.U.sub.n1-.vertline.=.vertline..v-ertline.V.sub.n1-.vertline.+V.sub.DCx.vertline. Equation (16) n.sub.r+=(.vertline.U.sub.n1+.vertline.+.vertline.U.sub.nd+.vertline..mul-tidot.n.sub.c-.vertline.U.sub.nc+.vertline..multidot.n.sub.d)/(.vertline.U-.sub.nd+.vertline.-.vertline.U.sub.nc+.vertline.) Equation (17) where each of the ".vertline.U.sub.nc+.vertline." and ".vertline.U.sub.nd+.vert- line." is a data signal used when each of said gray levels n.sub.c and n.sub.d to be fed during a positive frame is displayed in said characteristic of said data signal for a gray scale of said liquid crystal display: n.sub.r-=(.vertline.U.sub.n1-.vertline.+.vertline.U.sub.-nd-.vertline..multidot.n.sub.c-.vertline.U.sub.nc-.vertline..multidot.n.su-b.d)/(.vertline.U.sub.nd-.vertline.-.vertline.U.sub.nc-.vertline.) Equation (18) where each of the ".vertline.U.sub.nc-.vertline." and ".vertline.U.sub.nd-.vertline." is a data signal used when each of said gray levels n.sub.c and n.sub.d to be provided during a negative frame is displayed in said characteristic of said data signal for a gray scale of said liquid crystal display.

☐ 4. Document ID: US 20020181964 A1

L2: Entry 4 of 27 File: PGPB Dec 5, 2002

DOCUMENT-IDENTIFIER: US 20020181964 A1
TITLE: Method of setting laser power and developer bias in a multi-color electrophotographic machine

Summary of Invention Paragraph (6):
[0005] Toner patch sensors are used in printers and copiers to monitor the toner density of unfused images and provide a means of controlling the print darkness. In color printers and copiers, the toner patch sensors are used to maintain the color balance and in some cases to modify the gamma correction or halftone linearization as the electrophotographic process changes with the environment and aging effects. Conventional reflection based toner sensors use a single light source to illuminate a test patch of toner and one or more photosensitive devices to detect the reflected light. In most cases the densities of the toner patches are sensed on the photoconductor. Sensing toner patches on photoconductor drums, in a tandem architecture, however, can be an unattractive option since it requires four sensors (one for each photoconductive drum) and there is often little room for such sensors.

Detail Description Paragraph (45):
[0061] In order to set the electrophotographic conditions appropriately for black toner, six test patches are put on intermediate transfer belt 36 with six electrophotographic conditions that are all much lower than the target condition. The electrophotographic conditions include laser power (exposure energy), developer roll bias voltage, gamma correction and/or halftone linearization. These six patches are preferably formed so that the density of the patches range from 0.2 to 0.5 mg/cm.sup.2. The reflection signal from each patch is obtained by averaging multiple sample measurements of the toner patch sensor voltage. Each reflection signal is then converted into a reflection ratio by comparing it to a reflection signal taken with no toner on the same region of intermediate belt 36. The reflection ratio for each test patch is converted into a predicted L* or lightness value for the fused patch using empirically derived equations. The predicted L* value is the lightness value one would expect to measure if the toner patch was transferred to paper and fused. The six predicted L* values obtained in this manner are then fit to an exponential function as described below. This function is then used project L* values beyond the tested conditions and allows more accurate image density control for black toner on intermediate transfer belt 36. The specific mathematical form fit to the data is:

☐ 5. Document ID: US 20020030832 A1

L2: Entry 5 of 27 File: PGPB Mar 14, 2002

DOCUMENT-IDENTIFIER: US 20020030832 A1
TITLE: Image output device and test chart for the same

Summary of Invention Paragraph (15):
[0013] The above objects may be achieved by an image output device that prints halftone densities on a medium by dot-concentrated screen or line screen that occur in fixed frequencies or by area changes in random dots, which are each formed with a plurality of pixels. This image output device may include halftone patterns that change in density in steps, test chart data including a reference density pattern displayed in frequency different from tone patterns, and a calculating means for

calculating a tone correction table for printers from tone values from results of test chart data output on the medium, wherein the tone reproduction characteristics of the image output device may be corrected based on values in the tone correction table calculated by the calculating means.

Summary of Invention Paragraph (16):
[0014] The above objects may be achieved by a image output device for printing halftone densities on a medium by dot-concentrated screen or line screen that occur in fixed frequencies or by area changes in random dot screen, which are each formed by a plurality of pixels, and in this image output device, there may be provided a test chart where continuous areas in a tone pattern continuously changing in density and reference areas with a fixed density for density comparison with the continuous areas are output. This test chart may include a highlight proof part where the reference areas are reproduced in the color of a medium as it is, a shadow proof part where the reference areas are reproduced in the highest density, and a middle proof part where the reference areas are reproduced with a density different from that of the continuous areas, and calculating means for calculating a tone correction table for a printer from rising tone values obtained from an output result, on the medium, of the test chart data, and fading tone values of the shadow proof part, and most undistinguishable halftone values in the middle proof part, wherein the halftone reproduction characteristics of the image output device may be modified based on tone correction table values calculated by the calculating means.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 6. Document ID: US 20020024687 A1

L2: Entry 6 of 27 File: PGPB Feb 28, 2002

DOCUMENT-IDENTIFIER: US 20020024687 A1
TITLE: Dynamic generation of linearized halftone matrix

Detail Description Paragraph (14):
[0073] A tone correction function represented in FIG. 8 as a linearization vector 801, is applied to the level vector data. The tone correction function calculates a correction of a particular state of the printer system. The state of the device includes things such as a particular paper which is being printed on, a particular print head used, or the like. Linearizations of the image data are calculated dynamically. The tone correction function applied to the high bit content matrix data in the level vector re-groups the high resolution threshold values into 256 levels to achieve a tone correction and results in the tone corrected 8 bit per pixel halftone threshold matrix 802, which is stored in a read only memory or disk in a printer device, and which is used for applying a halftone to an image color plane 100 as described with reference to FIGS. 1 to 3 herein.

Detail Description Paragraph (15):
[0074] Linearization functions may be calculated based on a test target which is printed to a print media and then measured by an optical sensor provided in a printer device. Based on the readings from the sensor, which depends on the printing on the print media, the printer calculates a correction function, and the function can either be stored as a function, or in the best mode, as a vector. Once the vector is obtained, this is applied to the high bit content halftone matrix, to obtain a lower bit content tone corrected halftone matrix. The linearization function is not known beforehand, but depends on the state of the printer, and is calculated dynamically in the printer. The printer is capable of calculating its own linearization functions, and storing these as vectors, depending on the state of the printer, and which consumables it is using.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 7. Document ID: US 6560418 B2

L2: Entry 7 of 27 File: USPT May 6, 2003

DOCUMENT-IDENTIFIER: US 6560418 B2
TITLE: Method of setting laser power and developer bias in a multi-color electrophotographic machinie

Brief Summary Text (6):
Toner patch sensors are used in printers and copiers to monitor the toner density of unfused images and provide a means of controlling the print darkness. In color printers and copiers, the toner patch sensors are used to maintain the color balance and in some cases to modify the gamma correction or halftone linearization as the electrophotographic process changes with the environment and aging effects. Conventional reflection based toner sensors use a single light source to illuminate a test patch of toner and one or more photosensitive devices to detect the reflected light. In most cases the densities of the toner patches are sensed on the photoconductor. Sensing toner patches on photoconductor drums, in a tandem architecture, however, can be an unattractive option since it requires four sensors (one for each photoconductive drum) and there is often little room for such sensors.

Detailed Description Text (30):
In order to set the electrophotographic conditions appropriately for black toner, six test patches are put on intermediate transfer belt 36 with six electrophotographic conditions that are all much lower than the target condition. The electrophotographic conditions include laser power (exposure energy), developer roll bias voltage, gamma correction and/or halftone linearization. These six patches are preferably formed so that the density of the patches range from 0.2 to 0.5 mg/cm.sup.2. The reflection signal from each patch is obtained by averaging multiple sample measurements of the toner patch sensor voltage. Each reflection signal is then converted into a reflection ratio by comparing it to a reflection signal taken with no toner on the same region of intermediate belt 36. The reflection ratio for each test patch is converted into a predicted L* or lightness value for the fused patch using empirically derived equations. The predicted L* value is the lightness value one would expect to measure if the toner patch was transferred to paper and fused. The six predicted L* values obtained in this manner are then fit to an exponential function as described below. This function is then used project L* values beyond the tested conditions and allows more accurate image density control for black toner on intermediate transfer belt 36. The specific mathematical form fit to the data is:

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KMC | Draw Desc | Image

☐ 8. Document ID: US 6538762 B1

L2: Entry 8 of 27 File: USPT Mar 25, 2003

DOCUMENT-IDENTIFIER: US 6538762 B1
TITLE: Printer controller, and print system

Detailed Description Text (81):
Full-color RGB raster data are first input to a color conversion section 203 by way of an input interface 201. In an internal memory region 205 of the color conversion section 203, there is previously set a color conversion table 207 representing a relationship of conversion of values from the RGB color system to the CMYK color

system. By reference to the color conversion table 207, the color conversion section 203 converts the input full-color RGB raster data into the multi-valued CMYK raster data of full-color (or few number of colors). The multi-valued CMYK raster data re input to the halftoning section 207. A dithering table 213 to be used for dithering and a gamma table 207 to be used for (correction are set beforehand in an internal memory region 211 of the halftoning section 207, by means of the previously-described color conversion/halftoning parameter setting command. To carry out error variation, error memory 215 for storing varied errors is ensured. A halftoning section 209 subjects the multi-valued CMYK raster data to gamma correction, by reference to the gamma table 217. Further, the halftoning section 209 converts the gamma-corrected multi-valued CMYK raster data into binary CMYK raster data, by reference to the dithering table 213 or through use of the error memory 215. The binary CMYK raster data are output to an output interface section 219.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 9. Document ID: US 6463227 B1

L2: Entry 9 of 27 File: USPT Oct 8, 2002

DOCUMENT-IDENTIFIER: US 6463227 B1
TITLE: Color adjustment method for a laser printer with multiple print resolutions

Brief Summary Text (6):
Toner patch sensors are used in printers and copiers to monitor the toner density of unfused images and provide a means of controlling the print darkness. This information is then used to adjust laser power, developer bias, and other process conditions that affect image density. In color printers and copiers, the toner patch sensors are used to maintain the color balance and in some cases to modify the gamma correction or halftone linearization as the electrophotographic process changes with the environment and aging effects. Conventional reflection based toner sensors use a single light source to illuminate a test patch of toner and one or more photosensitive devices to detect the reflected light.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 10. Document ID: US 6392684 B1

L2: Entry 10 of 27 File: USPT May 21, 2002

DOCUMENT-IDENTIFIER: US 6392684 B1
TITLE: Image forming apparatus and image forming method

Detailed Description Text (78):
In case of the copying operation, as has been explained previously with reference to FIG. 1, an image of original O set on platen 7 is scanned by scanner module 1, and is sent to image processor 57. Image processor 57 performs known processes such as shading correction, various kinds of filtering, halftoning, gamma correction, and the like for the image signal from scanner module 1.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 11. Document ID: US 6384930 B1

L2: Entry 11 of 27 File: USPT May 7, 2002

DOCUMENT-IDENTIFIER: US 6384930 B1
TITLE: Printer control circuit, printer and print system

Detailed Description Text (83):
Full-color RGB raster data are first input to a color conversion section] by way of an input interface 201. In an internal memory region 205 of the color conversion section 203, a color conversion table 207 which represents a relationship of conversion of values from the RGB color system to the CMYK color system is set beforehand by the previously-described image conversion parameter setting command. By reference to the color conversion table 207, the color conversion section 203 converts the input full-color RGB raster data into multi-valued CMYK raster data of full-color (or few number of colors). The multi-valued CMYK raster data are input to the halftoning section 209. A dithering table 213 to be used for dithering and a gamma table 217 to be used for .gamma. correction are set in an internal memory region 211 of the halftoning section 209, by means of the previously-described image conversion parameter setting command. To carry out error variation, error memory 215 for storing varied errors is ensured. A halftoning section 209 subjects the multi-valued CMYK raster data to gamma correction, by reference to the gamma table 217. Further, the halftoning section 209 converts the gamma-corrected multi-valued CMYK raster data into binary CMYK raster data, by reference to the dithering table 213 or through use of the error memory 215. The binary CMYK raster data are output to an output interface section 219.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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☐ 12. Document ID: US 6266157 B1

L2: Entry 12 of 27 File: USPT Jul 24, 2001

DOCUMENT-IDENTIFIER: US 6266157 B1
TITLE: Method of error diffusion using 2.times.2 color correction and increment matching

Brief Summary Text (7):
Another publication, titled, "Measurement-based Evaluation of a Printer Dot Model for Halftone Algorithm Tone Correction", by C. J. Rosenberg, Journal of Electronic Imaging, Vol. 2 (3), pages 205-212, July 1993, describes a tone scale correction approach for digital printers which produce potentially overlapping circular dots, each dot centered at the center of a grid opening of a superimposed grid. This dot-overlapping model assumes that all printed dots have a perfectly circular shape. Here, the reflectance of a number of constant gray scale test patches or test patterns is measured, and the reflectance values are inverted to obtain a correction curve. This measurement-based calibration of a printer (see FIG. 2 of the Rosenberg paper) is repeated for all digital gray levels anticipated to be printed by the printer. The tone response correction curves are then used in conjunction with one of several known halftoning algorithms to generate a calculated dot diameter that would provide a best fit to the measured data.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments KWIC | Draw Desc | Image

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13. Document ID: US 6014462 A

L2: Entry 13 of 27 File: USPT Jan 11, 2000

DOCUMENT-IDENTIFIER: US 6014462 A
TITLE: Image processing apparatus and method for distinguishing alphanumeric symbols on a white background and those on a mesh pattern and individually processing such image data

Detailed Description Text (6):
Details of the image processing unit 102 are explained with reference to the block diagram shown in FIG. 2. As shown in FIG. 2, the image processing unit 102 includes the following units. An RGB gamma correction unit 201 receives RGB data from the original reading unit 101, corrects a gray-balance of the RGB data, and converts reflection ratio data in the RGB data into darkness data. An original recognition unit 202 determines regions of alphanumeric symbols and patterns in the image in accordance with the RGB data from the RGB gamma correction unit 201 in order to output a C/P signal and also determines regions of chroma and non-chroma in the image in accordance with the RGB data in order to output a B/C signal. A delay unit 203 delays the RGB data in order to synchronize the RGB data with the outputs from the original recognition unit 202. An RGB filter unit 204 performs a MTF (modulation transfer function) correction to the RGB data from the delay unit 203. A color correction unit 205 converts the filtered RGB data from the RGB filter unit 204 into CMY data including C, M, and Y colors using a primary masking technique or the like. A UCR unit 206 performs a UCR (under color removal) operation, for removing a background color, on the CMY data to generate Bk data. A magnification unit 207 performs an operation of image enlargement or reduction, or preserves an original image size in a main scanning direction on output from the UCR unit 206. A CMYBk filter unit 208 performs operations of smoothing and sharpening on output from the magnification unit 207. A CMYBk gamma correction unit 209 performs a gamma correction on output from the CMYBk filter unit 208 in accordance with a frequency characteristic of the image recording unit 103. A halftone processing unit 210 performs quantization operations such as dither-matrix and error diffusion processings on the gamma-corrected output.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

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14. Document ID: US 5946455 A

L2: Entry 14 of 27 File: USPT Aug 31, 1999

DOCUMENT-IDENTIFIER: US 5946455 A
TITLE: Model based error diffusion with correction propagation

Brief Summary Text (16):
Stucki already considered the problem of compensating for actual black dot sizes and shapes in error diffusion, which is important since the basic method assumes square black and white dots of the same size. Error diffusion makes it harder to calibrate according to printer performances than passive dithering methods, as discussed for instance in "Measurement of Printer Parameters for Model-based Halftoning", J. El. Imag., 2(3) (1993), pp. 193-204, by T. N. Pappas, C. K. Dong, and D. I. Neuhoff, or in "Measurement-based Evaluation of a Printer Dot Model for Halftone Algorithm Tone Correction", J. El. Imag., 2(3) (1993), pp. 205-212, by C. J. Rosenberg, making it preferable to use model-based error diffusion as described for instance in "Printer Models and Error Diffusion", IEEE Transactions on Image Processing, 4(1) (1995), pp. 66-80, by T. N. Pappas and D. L. Neuhoff, or in "A modified error-based error diffusion", IEEE Signal Processing Letters, 4(2) (1997), pp. 36-38, by Y. Lin and T. C. Ko.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 15. Document ID: US 5854882 A

L2: Entry 15 of 27 File: USPT Dec 29, 1998

DOCUMENT-IDENTIFIER: US 5854882 A
TITLE: Halftone correction systems

Brief Summary Text (9):
Another publication, titled Measurement-based Evaluation of a Printer Dot Model for Halftone Algorithm Tone Correction, by C. J. Rosenberg, Journal of Electronic Imaging, Vol. 2 (3), pages 205-212, July 1993, describes a tone scale correction approach for digital printers which produce potentially overlapping circular dots, each dot centered at the center of a grid opening of a superimposed grid. This dot overlapping model assumes that all printed dots have a perfectly circular shape. Here, the reflectance of a number of constant gray-scale test patches, or test patterns, is measured, and the reflectance values are inverted to obtain a tone response correction curve. This measurement-based calibration of a printer (see FIG. 2 of the Rosenberg paper) is repeated for all digital gray levels anticipated to be printed by the printer. The tone response correction curves are then used in conjunction with one of several known halftoning algorithms to generate a calculated dot diameter which would provide a best fit to the measured data, whereby one best fit approach is based on minimizing the rms error between the measured tone response curve and that derived from the model, and a second approach is based on generating an improved match in terms of the visual perception by a human observer.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 16. Document ID: US 5732151 A

L2: Entry 16 of 27 File: USPT Mar 24, 1998

DOCUMENT-IDENTIFIER: US 5732151 A
TITLE: Computerized memory mapping method for transforming color data

Brief Summary Text (20):
In addition to transformation between color space models and halftoning, other color correction variables include white/black references, gamma correction (see e.g., Software Developer's Guide, HP DeskJet 500 Series Printers, Edition 1, copr. 1994 by Hewlett-Packard Company, incorporated herein by reference), ink-jet drop depletion techniques (see e.g., U.S. patent application Ser. No. 07/926,264, by Allen et al, filed Aug. 5, 1992, incorporated herein by reference in its entirety), and dithering. For example, to print from an RGB monitor color space to an ink-jet CMYK output, traditional methods receive a description of each pixel as a position on the page and a red, green, and blue data triplet, perform these color corrections as need on that triplet, and then halftone process to create a description of the actual printable dots. Except where the next pixel is identical to that just specified, the entire process is repeated pixel-by-pixel.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 17. Document ID: US 5724158 A

L2: Entry 17 of 27 File: USPT Mar 3, 1998

DOCUMENT-IDENTIFIER: US 5724158 A
TITLE: Image processing apparatus for selectively using MTF correction process for different regions of a composite image

Detailed Description Text (50):
In accordance with the input-output characteristics of the gamma table specification stored in the memory part 1104, the gamma corrector 1103 converts an input multilevel digital signal (received from the A/D converter 1102) into an output multilevel digital signal, and this output multilevel digital signal is supplied to the MTF corrector 1106, the pseudo halftone rendition part 1108, and the region discriminator 1109. For the sake of convenience, a case in which the density indicated by the input multilevel digital signal received from the A/D converter 1102 ranges from the value "0" (the white density level) to the value "255" (the black density level) and in which the corrected density indicated by the output multilevel digital signal output by the gamma corrector 1103 ranges from the value "0" (the white density level) to the value "63" (the black density level) is considered.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

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☐ 18. Document ID: US 5550647 A

L2: Entry 18 of 27 File: USPT Aug 27, 1996

DOCUMENT-IDENTIFIER: US 5550647 A
TITLE: Image processing apparatus for converting a multilevel image signal into a bi-level image signal

Detailed Description Text (51):
In accordance with the input-output characteristics of the gamma table specification stored in the memory part 1104, the gamma corrector 1103 converts an input multilevel digital signal (received from the A/D converter 1102) into an output multilevel digital signal, and this output multilevel digital signal is supplied to the MTF corrector 1106, the pseudo halftone rendition part 1108, and the region discriminator 1109. For the sake of convenience, a case in which the density indicated by the input multilevel digital signal received from the A/D converter 1102 ranges from the value "0" (the white density level) to the value "255" (the black density level) and in which the corrected density indicated by the output multilevel digital signal output by the gamma corrector 1103 ranges from the value "0" (the white density level) to the value "63" (the black density level) is considered.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

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☐ 19. Document ID: US 5546165 A

L2: Entry 19 of 27 File: USPT Aug 13, 1996

DOCUMENT-IDENTIFIER: US 5546165 A
TITLE: Scanner as test print densitometer for compensating overall process drift and

nonuniformity

Detailed Description Text (25):
From halftone step tablet test prints, the gamma correction (for rendering) is recalibrated according to the deviation from the desired halftone tone scale.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 20. Document ID: US 5469267 A

L2: Entry 20 of 27 File: USPT Nov 21, 1995

DOCUMENT-IDENTIFIER: US 5469267 A
TITLE: Halftone correction system

Brief Summary Text (5):
Another publication, titled Measurement-based Evaluation of a Printer Dot Model for Halftone Algorithm Tone Correction, by C. J. Rosenberg, Journal of Electronic Imaging, Vol. 2 (3), pages 205-212, July 1993, describes a tone scale correction approach for digital printers which produce potentially overlapping circular dots, each dot centered at the center of a grid opening of a superimposed grid. This dot overlapping model assumes that all printed dots have a perfectly circular shape. Here, the reflectance of a number of constant gray scale test patches or test patterns is measured, and the reflectance values are inverted to obtain a correction curve. This measurement-based calibration of a printer (see FIG. 2 of the Rosenberg paper) is repeated for all digital gray levels anticipated to be printed by the printer. The tone response correction curves are then used in conjunction with one of several known halftoning algorithms to generate a calculated dot diameter which would provide a best fit to the measured data, whereby one best fit approach is based on minimizing the rms error between the measured tone response curve and that derived from the model, and a second approach is based on generating an improved match in terms of the visual perception by a human observer.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 21. Document ID: US 5383032 A

L2: Entry 21 of 27 File: USPT Jan 17, 1995

DOCUMENT-IDENTIFIER: US 5383032 A
TITLE: Image processing system

Detailed Description Text (4):
FIG. 2 is a schematic block diagram for illustrating the configuration of the image input unit 8 of the image editing system of FIG. 1. Reference numeral 10 denotes a CPU for controlling the image input unit 6; 11 an image sensor (hereunder referred to as a CCD) for outputting an analog voltage signal in response to light incident thereto by converting the intensity of the incident light to the magnitude of a voltage (namely, the level of an analog voltage); 12 an analog-to-digital (A/D) converter for converting an analog voltage signal output from the CCD 11 to an 8-bit digital voltage signal; 13 a shading correction circuit for correcting variation in the voltage signal due to the shading occurring in the read or input image; 14 a tone correction circuit for performing a conversion of densities represented by input or read image data by correcting the densities represented by the digital

voltage signal; 15 a binarization circuit for converting the 8-bit digital voltage signal into a binary data signal representing 0 or 1 by performing a halftone-dot generation processing on the density data represented by the 8-bit digital voltage signal, which is corrected by the tone correction circuit 14; 16 a sampling circuit for sampling the density data (namely, the image data) represented by the 8-bit digital voltage signals, which are output from the shading correction circuit 13, at a predetermined rate under the control of the CPU 10; and 17 a readable/writable random access memory (hereunder abbreviated as a RAM) for storing the image data sampled by the sampling circuit 16.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

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☐ 22. Document ID: US 5374996 A

L2: Entry 22 of 27   File: USPT   Dec 20, 1994

DOCUMENT-IDENTIFIER: US 5374996 A
TITLE: Image processing system

Detailed Description Text (5):
FIG. 2 is a schematic block diagram for illustrating the configuration of the image input unit 8 of the image editing system of FIG. 1. Reference numeral 10 denotes a CPU for controlling the image input unit 6; 11 an image sensor (hereunder referred to as a CCD) for outputting analog voltage signal in response to light incident thereto by converting the intensity of the incident light to the magnitude of a voltage (namely, the level of an analog voltage); 12 an A/D converter for converting an analog voltage signal output from the CCD 11 to an 8-bit digital voltage signal; 13 a shading correction circuit for correcting variation in the voltage signal due to a shading phenomenon occurring in a read or input image; 14 a tone correction circuit for performing a conversion of densities represented by input or read image data; 15 a binarization circuit for converting the 8-bit digital voltage signal into a binary data signal representing 0 or 1 by performing halftone-dot generation processing on the density data represented by the 8-bit digital voltage signal, which is corrected by the tone correction circuit 14; 16 a counter for repeatedly performing a process of counting a value set by the CPU 10 and outputting a positive signal of a period (hereunder sometimes referred to as a sampling period) corresponding to a pixel sampled when the counting of value is completed; 17 a gate circuit for selecting digital image data in response to the signal output from the counter 16; 18 a buffer for storing the image data of 1 line selected by the gate circuit 17; 20 a readable/writable memory for storing the image data temporarily held in the buffer 18; and 19 a transfer circuit for transferring the image data of 1 line temporarily stored in the buffer 18 to the memory 20 in response to a control signal output from the CPU 10.

Detailed Description Text (15):
The binarization circuit 15 converts the multi-level image data corrected by the tone correction circuit 14 into binary image data (or halftone-dot image data). In this circuit, the density (namely, the tone level) represented by the density data of each pixel output from the tone correction circuit 14 is compared with the value set at a corresponding cell of the halftone-dot pattern table of FIG. 6 established therein. If the tone level of a pixel is larger than the value set at the corresponding cell of the table, the color of the pixel is determined as black (corresponding to a value of 1). Conversely, if the tone level of a pixel is smaller than the value set at the corresponding cell of the table, the color of the pixel is determined as white (corresponding to a value of 0). The same halftone-dot pattern table is repeatedly used to be compared with image data of pixels of the same number as of cells thereof. FIG. 8 illustrates the relation between each pixel of the input image and a corresponding cell of the halftone-dot pattern table diagramatically. As is apparent from this figure, each pixel of the input image is in one-to-one correspondence relation with a cell of the halftone-dot pattern table.

Detailed Description Text (33):
FIG. 16 is a schematic block diagram for illustrating the configuration of the image input unit 106 of FIG. 15. Reference numeral 110 denotes a CPU for controlling the image input unit 106; 115 a binarization circuit for converting the 8-bit digital signal into a binary data signal representing 0 or 1 by performing a halftone-dot generation processing on the density data represented by the 8-bit digital signal, which is corrected by the tone correction circuit 14; 116 a counter for repeatedly performing a process of counting a preset value "4" and outputting a positive signal of a period corresponding to a pixel sampled when the counting of the value is completed; and 119 a transfer circuit for transferring the image data of 1 line temporarily stored in the buffer 18 to the memory 120 in response to a control signal output from the CPU 110.

Detailed Description Text (45):
The binarization circuit 15 converts the multi-level image data corrected by the tone correcton circuit 14 into binary image data (or halftone-dot image data). In this circuit, the density (namely, the tone level) represented by the density data of each pixel output from the tone correction circuit 14 is compared with the value set at a corresponding cell of the halftone-dot pattern table of FIG. 22 established therein. If the tone level of a pixel is larger than the value set at the corresponding cell of the table, the color of the pixel is determined as black (corresponding to a value of 1). Conversely, if the tone level of a pixel is smaller than the value set at the corresponding cell of the table, the color of the pixel is determined as white (corresponding to a value of 0). The same halftone-dot pattern table is repeatedly used to be compared with image data of pixels of the same number as of cells thereof. FIG. 23 illustrates the relation between each pixel of the input image and a corresponding cell of the halftone-dot pattern table diagramatically. As is apparent from this figure, each pixel of the input image is in one-to-one correspondence relation with a cell of the halftone-dot pattern table.

Detailed Description Text (61):
FIG. 29 is a schematic block diagram for illustrating the configuration of the image input unit 206 of FIG. 28. Reference numeral 210 denotes a CPU for controlling the image input unit 206; 215 a binarization circuit for converting the 8-bit digital signal into a binary data signal representing 0 or 1 by performing a halftone-dot generation processing on the density data represented by the 8-bit digital signal, which is corrected by the tone correction circuit 14; 216 a counter for repeatedly performing a process of counting a preset value "36" and outputting a positive signal of a period corresponding to a pixel sampled when the counting of the value is completed; 220 a readable/writable memory for storing the image data selected by the gate circuit 17 and temporarily held in the buffer 18; and 119 a transfer circuit for transferring the image data of 1 line temporarily stored in the buffer 18 to the memory 120 in response to a control signal output from the CPU 210.

Detailed Description Text (73):
The binarization circuit 15 converts the multi-level image data corrected by the tone correcton circuit 14 into binary image data (or halftone-dot image data). In this circuit, the density (namely, the tone level) represented by the density data of each pixel output from the tone correction circuit 14 is compared with the value set at a corresponding cell of the halftone-dot pattern table of FIG. 35 established therein. If the tone level of a pixel is larger than the value set at the corresponding cell of the table, the color of the pixel is determined as black (corresponding to a value of 1). Conversely, if the tone level of a pixel is smaller than the value set at the corresponding cell of the table, the color of the pixel is determined as white (corresponding to a value of 0). The same halftone-dot pattern table is repeatedly used to be compared with image data of pixels of the same number as of cells thereof. FIG. 36 illustrates the relation between each pixel of the input image and a corresponding cell of the halftone-dot pattern table diagramatically. As is apparent from this figure, each pixel of the input image is in one-to-one correspondence relation with a cell of the halftone-dot pattern table.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 23. Document ID: US 4858023 A

L2: Entry 23 of 27 File: USPT Aug 15, 1989

DOCUMENT-IDENTIFIER: US 4858023 A
TITLE: Image read apparatus

Abstract Text (1):
An image read apparatus provided with a reader which scans an original and a reference white pattern and reads the image by an image sensor, a line RAM which temporarily stores therein the read difference white pattern, a conversion memory which has a conversion table for performing shading correction and gamma correction and which outputs a correction signal from an image signal of the reference white pattern and an original image signal, and a binary digitizing circuit which binary-digitizes the correction signal by a predetermined method and outputs it to an output circuit, so as to simultaneously perform the shading and gamma correction of the original image signal and reads a halftone faithfully to the original to output the read image signal to an output device.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 24. Document ID: US 4586089 A

L2: Entry 24 of 27 File: USPT Apr 29, 1986

DOCUMENT-IDENTIFIER: US 4586089 A
TITLE: Image processor

Detailed Description Text (28):
According to the present invention as described above, the A/D converted and sampled digital image signal is converted in a predetermined manner controlled by the white and black densities of the original so as to perform linear correction between the input original (continuous tone image) and the recorded image (halftone image). When the present invention is applied to an image scanner/recorder wherein the input image signal proportional to light reflected by a continuous tone image is reproduced by a black-and-white binary dot image (halftone image), linear tone conversion between the image of the original and the recorded image is guaranteed. A deviation in tone reproduction in the conventional trial-and-error tone correction can be completely eliminated. Since the image processor has such an automatic linear tone correction function, the correction function serves as a control function to control the halftone image corresponding to optimal perception, thereby providing an excellent apparatus from the viewpoint of human engineering. Furthermore, a highly precise change in tone of the continuous tone image can be performed without trial-and-error.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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☐ 25. Document ID: JP 2000196863 A

L2: Entry 25 of 27 File: JPAB Jul 14, 2000

DOCUMENT-IDENTIFIER: JP 2000196863 A
TITLE: IMAGE READER

Abstract Text (2):
SOLUTION: An image processing part 3 quantizes the image signals of a main scanning line unit from an image sensor 2 by an A/D conversion part and converts them to multi-level image information. The multi-level image information is inputted to a multi-level image processing part, the processings of gamma correction, a halftone processing and an MTF correction processing, etc., are performed there, and they are binarized and outputted by a binarization processing part. This image reader 1 is provided with an out-of-original area recognition means for recognizing the out-of-original area in the image information obtained by reading the effective read area, and an out-of-original area correction means for converting the pixels belonging to the out-of-original area in the image information recognized by the out-of-original area recognition means to the white pixels.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

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☐ 26. Document ID: JP 09068764 A

L2: Entry 26 of 27   File: JPAB   Mar 11, 1997

DOCUMENT-IDENTIFIER: JP 09068764 A
TITLE: METHOD FOR IMAGE PROCESSING

Abstract Text (2):
SOLUTION: The film image imprinted on a developed photographic film 52 is picked up, and a reference maximum value and a reference minimum value are found from an image signal obtained in the case of a picking up the image. The reference maximum value and the reference minimum value are used in signal processing for adjusting the tone of the image, etc., and the exposing state of the film image is further decided based on at least one of the reference maximum value, the reference minimum value, and the average value of the image signal. When the exposing state is decided as to under-exposure, gamma obtained in the case of the gamma correction is made small than that obtained in the case of standard exposure, so that halftone is prevented from being dark. On the other hand, when the exposing state is decided as the over-exposure, the gamma obtained in the case of gamma correction is made larger than that obtained in the case of the standard exposure, so that the tone is adjusted to prevent the halftone from getting too bright. At least one of the reference maximum value and the reference minimum value is corrected to perform good color reproduction in the case a color image is color failure scene.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

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☐ 27. Document ID: JP 63252067 A

L2: Entry 27 of 27   File: JPAB   Oct 19, 1988

DOCUMENT-IDENTIFIER: JP 63252067 A
TITLE: IMAGE READ INPUT DEVICE EQUIPPED WITH GAMMA CORRECTION FUNCTION

Abstract Text (1):
PURPOSE: To attain pseudo halftone binarization processing suitable for a gamma

coefficient of a printer to be used by printing a test pattern and adding a circuit measuring the density and applying the optimum gamma correction to an image read input device.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

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☐ 1. Document ID: US 20030064320 A1

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L2: Entry 1 of 16 File: PGPB Apr 3, 2003

PGPUB-DOCUMENT-NUMBER: 20030064320
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030064320 A1

TITLE: Active components and photosensitive resin composition containing the same

PUBLICATION-DATE: April 3, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hanabata, Makoto	Kyoto-shi		JP	
Sato, Masahiro	Kyoto-shi		JP	
Katayama, Junko	Kyoto-shi		JP	
Kitajima, Satsuki	Kyoto-shi		JP	

US-CL-CURRENT: 430/270.1; 430/325, 430/330

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 2. Document ID: US 20020155376 A1

L2: Entry 2 of 16 File: PGPB Oct 24, 2002

DOCUMENT-IDENTIFIER: US 20020155376 A1
TITLE: Positive resist composition

Detail Description Paragraph:
[0167] Further, the remaining film thickness against the exposure amount was measured by Random Ace film thickness measuring apparatus (manufactured by Dainippon Screen Mfg Co., Ltd.), and values were plotted logarithm of exposure amount in the abscissa and normalized film thickness after PEB in the ordinate. The inclination of inclined part (tan .theta.) of the resulted sensitivity curve was .gamma.-value. The .gamma.-value is an index of resolution, and when it is larger, contrast between non-exposed parts and exposed parts is higher and resolution is more excellent.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 3. Document ID: US 20010048730 A1

L2: Entry 3 of 16 File: PGPB Dec 6, 2001

DOCUMENT-IDENTIFIER: US 20010048730 A1
TITLE: Method of highly sensitive analysis of nuclides by multiple gamma-ray detection

Summary of Invention Paragraph:
[0001] This invention relates to the application of multiple gamma-ray detection to qualitative and quantitative determination of radionuclides or nuclides in samples radioactivated by neutrons or other particle rays or gamma-rays. The multiple gamma-rays emitted from the nuclides are measured simultaneously and information is taken for a pair of gamma-rays from each nuclide, thereby analyzing the nuclides at higher resolution than the conventional measurement of gamma-rays.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

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☐ 4. Document ID: US 6653043 B1

L2: Entry 4 of 16 File: USPT Nov 25, 2003

DOCUMENT-IDENTIFIER: US 6653043 B1
TITLE: Active particle, photosensitive resin composition, and process for forming pattern

Detailed Description Text (22):
.gamma.-value: the slope angle .theta. was measured by plotting the normalized thickness of a resist layer (the thickness of a residual resist layer/the thickness of the initial resist layer) with respect to the logarithm of exposure amount and tan .theta.was taken as the .gamma.-value (generally, the higher the .gamma.-value, the higher the resolution is).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

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☐ 5. Document ID: US 6534235 B1

L2: Entry 5 of 16 File: USPT Mar 18, 2003

DOCUMENT-IDENTIFIER: US 6534235 B1
TITLE: Photosensitive resin composition and process for forming pattern

Detailed Description Text (97):
(iii) .gamma.-value: the slope angle .theta. was measured by plotting the normalized thickness of a resist layer (the thickness of a residual resist layer/the thickness of the initial resist layer) with respect to the logarithm of the amount of exposure, and tan .theta. was taken as the .gamma.-value (generally, the higher the .gamma.-value is, the higher the resolution is).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 6. Document ID: US 5760401 A

L2: Entry 6 of 16 File: USPT Jun 2, 1998

DOCUMENT-IDENTIFIER: US 5760401 A
TITLE: Resolution enhancement apparatus and method for dual head gamma camera system capable of coincidence imaging

Brief Summary Text (13):
However, when NaI(Tl) crystals are substituted for BGO crystals in PET imaging, such as in a combined SPECT and PET system, and the collimator is removed, the resolution and quality of the image reconstructed by PET imaging is degraded. Without a collimator, the incoming gamma rays intercept the NaI(Tl) crystal at a wide variety of angles, rather than the narrow range of angles (approximately perpendicular to the crystal surface) used in the SPECT systems. When a gamma ray interacts with the NaI(Tl) crystal during PET imaging, the conversion of gamma rays, to light photons takes place some distance within the crystal plane. Therefore, if the gamma ray is impinging the surface of the crystal at a slant angle, the registration by the detector will be displaced by some distance. In other words, the larger the incident angle and the in-crystal plane displacement of the in-coming gamma ray, the larger the resolution degradation of a point source. Thus, it is desirable to provide a resolution enhancement apparatus and method to correct this type of distortion which reduces the overall quality of the image reconstructed in PET imaging.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 7. Document ID: US 5436958 A

L2: Entry 7 of 16 File: USPT Jul 25, 1995

DOCUMENT-IDENTIFIER: US 5436958 A
TITLE: Adjustable collimator

Detailed Description Text (5):
The collimator 11 may also be configured to operate at higher resolution when lower gamma ray energies are employed. Referring particularly to FIGS. 4A and 4B, in this mode the movable lamina 20 are translated by a distance equal to one-half the pitch of the openings 21. The resulting misalignment of alternate lamina 20 creates a larger number of smaller holes 21' through the collimator 11 to provide increased resolution. However, as shown in FIG. 4B, the blocking ability of the resulting septa 25' is significantly reduced by this misalignment.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 8. Document ID: US 5371672 A

L2: Entry 8 of 16 File: USPT Dec 6, 1994

DOCUMENT-IDENTIFIER: US 5371672 A

h e b b g e e e f e ef b e

TITLE: Scintillation camera apparatus capable of quantitatively eliminating scattering signal components by setting multiple window and method for quantitatively eliminating scattering signal components

Detailed Description Text (65):
While the present invention has been described in detail, a plurality of windows are set with respect to a single photopeak and image data within the plural windows are acquired so as to remove the scattering signal components from the .gamma.-ray energy spectrum defined within these windows. Accordingly, a total time duration required for this scattering component elimination can be considerably shortened, as compared with that of the conventional scattering component removing methods. Moreover, since the .gamma.-ray scattering signal components with respect to this photopeak can be precisely inferred and eliminated from the relevant .gamma.-ray image data, higher resolution of gamma-ray image can be achieved, and also the quantative scattering component removing methods can be realized.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

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9. Document ID: US 5325153 A
L2: Entry 9 of 16 File: USPT Jun 28, 1994

DOCUMENT-IDENTIFIER: US 5325153 A
TITLE: Color image formation apparatus with density measurement

Detailed Description Text (20):
The control unit 50 can obtain a higher resolution data information of .gamma. characteristics of primary and achromatic colors. Therefore, the control unit 50 can produces a more accurate a conversion table for compensating of characteristics of formation of images. That is, the control unit 50 changes the charging voltages of the photosensitive member 1, toners, and the like for compensation of .gamma. characteristics.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

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10. Document ID: US 4889791 A
L2: Entry 10 of 16 File: USPT Dec 26, 1989

DOCUMENT-IDENTIFIER: US 4889791 A
TITLE: Positive type photoresist material

Detailed Description Text (16):
One of the measures indicating the resolution is the gamma value which is given by the inclination of a sensitivity characteristic curve at the point of intersection thereof with the horizontal axis. The larger this gamma value, the higher is the resolution of the photoresist material. The resolution was evaluated mainly on the basis of these gamma values.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

☐ 11. Document ID: US 4529882 A

L2: Entry 11 of 16 File: USPT Jul 16, 1985

DOCUMENT-IDENTIFIER: US 4529882 A
TITLE: Compton scattering gamma radiation camera and method of creating radiological images

Detailed Description Text (65):
From the above description including preferred embodiments it can be seen that the present invention makes it possible to construct a gamma camera which has a higher resolution than that which is found with many gamma cameras of the prior art, which has a very high ability to discriminate against photons which have resulted from unwanted Compton scattering, greatly increasing the clarity of the image which is produced, and which has a higher count rate per minute per microcurie of radioactive source material used, enabling gamma cameras according to the present invention to create images either at a greater speed or at a lower dosage of radioactive source material than most gamma cameras in the prior art.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

☐ 12. Document ID: JP 2001235547 A

L2: Entry 12 of 16 File: JPAB Aug 31, 2001

DOCUMENT-IDENTIFIER: JP 2001235547 A
TITLE: HIGH SENSITIVITY NUCLEAR SPECIES ANALYSIS METHOD BY MULTIPLE GAMMA RAY DETECTION

Abstract Text (1):
PROBLEM TO BE SOLVED: To analyze an activated sample with higher resolution than conventional gamma ray measurement by making a multiple gamma ray analysis to two-dimensionally develop spectrum to thereby prepare a two-dimensional matrix in a method of combining the multiple gamma ray analysis with trace element analysis.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

☐ 13. Document ID: JP 01046679 A

L2: Entry 13 of 16 File: DWPI Feb 21, 1989

DERWENT-ACC-NO: 1989-097562
DERWENT-WEEK: 198913

TITLE: Gamma camera for diagnostic use - has detection device composed of semiconductor elements giving electrical signals on reception of radioactive rays

Basic Abstract Text (2):
USE/ADVANTAGE - The gamma camera is used for diagnostic purposes. It offers higher

resolution than conventional gamma camera types.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

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☐ 14. Document ID: JP 63184745 A

L2: Entry 14 of 16 File: DWPI Jul 30, 1988

DERWENT-ACC-NO: 1988-253902
DERWENT-WEEK: 198836

TITLE: Positive photoresist compsn. sensitive to UV light - comprises cresol formaldehyde! novolak resin and 1,2 naphthoquinone 2-di:azido-4-sulphonic ester

Basic Abstract Text (2):
ADVANTAGE - Use of the specified novolak resin and quinone diazide cpd. in specified ratio attains good resolution (i.e. higher gamma) and sensitivity to 300-380 nm UV light.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

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☐ 15. Document ID: DE 3414104 A, DE 3414104 C, JP 59192245 A

L2: Entry 15 of 16 File: DWPI Oct 25, 1984

DERWENT-ACC-NO: 1984-270976
DERWENT-WEEK: 198444

TITLE: Fluoro-methylated polystyrene and use as negative resist material - e.g. in electronics and printing plate mfr., having high sensitivity and resolution

Basic Abstract Text (2):
USE/ADVANTAGE (I) are used in (negative) resist material for electronics, printing technology and fine mechanics, e.g. for the prodn. of magnetic valves, ICs, printing plates or shadow masks. They have higher sensitivity towards high energy radiation and higher resolution (gamma value) than chloromethylated polystyrene of the same mol. wt. and excellent resistance to heat, dry etching and plasmas.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

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☐ 16. Document ID: SU 896692 B

L2: Entry 16 of 16 File: DWPI Jan 8, 1982

DERWENT-ACC-NO: 1982-97065E
DERWENT-WEEK: 198245

TITLE: Nuclear-gamma-resonance spectrometry tuned filter - has single-line absorbers in series on constant speed drives to minimise width of isotope resonance line

Basic Abstract Text (1):
Tuned filter contg. a substance with resonance nuclei has its spectral characteristic improved at the same time as provision is made for retuning and expanding the number of Mossbauer isotopes for which tuned filters can be used. Two single-line absorbers (2,3) are arranged in series on constant speed drives (4,5). The width of the isotope resonance radiation line can be reduced to min. value for greater resolution of nuclear-gamma-resonance spectroscopy.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Ima

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Term	Documents
GAMMA	249110
GAMMAS	816
DPI	15163
DPIS	154
DOTS	95447
DOT	196286
PER	1640089
PERS	988
INCH	469906
INCHES	399358
HIGHER	2096093
(GAMMA NEAR3 (RESOLUT$5 OR DPI OR (DOTS PER INCH)) NEAR1 (HIGHER OR LARGER OR GREATER)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	16

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